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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/716,880	11/20/2000	Markku Lipponen	460-009934-US	1077

7590 06/07/2004  
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EXAMINER

GANTT, ALAN T

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 06/07/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/716,880	<b>Applicant(s)</b> LIPPONEN ET AL.	
	<b>Examiner</b> Alan T. Gantt	<b>Art Unit</b> 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11 and 13-18 is/are rejected.
- 7) ☒ Claim(s) 3 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11</u>  | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 3/24/04 have been fully considered. Applicant primarily argues that:

(a) With the Kim reference, both the first keypad and the second keypad have contact pairs either with the transmitting element of the keymat or by using the membrane causes the key to be generated. Applicant further argues that both keypads are implemented with a structure where there is a contact pair on the circuit board for each key on both keypads, which by short-circuiting cause a key signal at a certain crossing of a column and line.

(b) There is nothing in the disclosure of Kim that describes the use of a touch sensitive element to generate signals indicative of a particular key of a keyboard.

Regarding (a) and (b), the examiner feels that the applicant's arguments do possess some merit. Therefore, a second Kim reference is presented to better meet the applicant's claim limitations

### ***Claim Objections***

The independent claim numbering and quantity has changed since the previous Office. Previously the independent claims were claims 1, 9, and 15. In the latest amendment the independent claims are claims 1 and 10. Please explain and advise.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 6, 7, 10, 11, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim I (WO 97/41677), in view of Lundquist.

Regarding claim 1, Kim I discloses an electronic device, which comprises at least a keyboard (page 2, line 31 to page 3, line 10), which keyboard is arranged as a keyboard plate, characterized in that said keyboard also comprises a touch sensitive element (page 4, line 30 to page 5, line 2), that said keyboard plate is arranged as fixed over the touch sensitive element so that the depression of a key is arranged to be transmitted to the touch sensitive element essentially at the point of the key (page 2, line 31 to page 3, line 10), and that the electronic device comprises means for determining the point of depression in the touch sensitive element, whereby it is arranged to be determined on the basis of the determined point of depression which key has been depressed (page 2, line 31 to page 3, line 10). Kim I does not comprise a key on the keyboard that controls function of the electronic device.

Lundquist discloses a portable telephone that includes a touch sensitive screen that a flip element can cover and which the keys of the flip have input means. The flip has a keypad with a

Art Unit: 2684

plurality of keys, which correspond to a desired function. The function of each key is determined by the software of the portable telephone. The touch screen detects which key has been pushed and carries out the desired function. (col. 3, lines 6-22)

Kim and Lundquist are combinable because they share a common endeavor, portable telephones that allow keypad usage with an underlying touch sensitive element. At the time of the applicant it would have been obvious to modify Kim to include device controls (ON/OFF, etc.) at the keypad positioned over touch sensitive elements as done by Lundquist so that a more complete functionality can be had by such devices.

Kim II discloses an electronic device, which comprises at least a keyboard of which keyboard is arranged as a keyboard plate. Kim II comprises keys on the keyboard that controls function of the electronic device, such as a clear, send, volume, etc.

Regarding claim 10, Kim I discloses a method recognizing the depression of a key of the keyboard of an electronic device, (page 2, line 31 to page 3, line 10), in which method the keys are formed into a keyboard plate, characterized in that said keyboard also comprises a touch sensitive element (page 4, line 30 to page 5, line 2), characterized in that said keyboard plate is arranged as fixed over the touch sensitive element so that the depression of a key is arranged to be transmitted to the touch sensitive element over which the keyboard plate is arranged as fixed so that the depression of a key caused said key to touch the touch sensitive element essentially at

Art Unit: 2684

the point of the key (page 2, line 31 to page 3, line 10), and that the point of touching in the touch sensitive element is determined in the electronic device whereby on the basis of the determine point of touching it is determined by which key has been depressed (page 2, line 31 to page 3, line 10). Kim I does not comprise a key on the keyboard that controls function of the electronic device.

Lundquist discloses a portable telephone that includes a touch sensitive screen that a flip element can cover and which the keys of the flip have input means . The flip has a keypad with a plurality of keys, which correspond to a desired function. The function of each key is determined by the software of the portable telephone. The touch screen detects which key has been pushed and carries out the desired function. (col. 3, lines 6-22)

Kim and Lundquist are combinable because they share a common endeavor, portable telephones that allow keypad usage with an underlying touch sensitive element. At the time of the applicant it would have been obvious to modify Kim to include device controls (ON/OFF, etc.) at the keypad positioned over touch sensitive elements as done by Lundquist so that a more complete functionality can be had by such devices.

Regarding claims 2 and 11, Kim discloses an electronic device (1) according to claim 1, characterized in that the keyboard plate is a keyboard mat (Figure 2 same as keypad mat).

Regarding claims 6, and 15, Kim shows an electronic device which comprises at least one body housing element, characterized in that it comprises a keyboard element arranged as turning

Art Unit: 2684

in relation to the body housing element, in which keyboard element the keyboard is disposed (Figure 2).

Regarding claims 7, 14, and 16, Kim shows an electronic device characterized in that the keyboard element, which has a first and a second extreme position, is arranged as turning between the first and the second extreme position, and in the first extreme position the keyboard element is preferably placed over the body housing element so that the keyboard element functions as protection for the display and the keyboard is at least partly invisible, and in the second extreme position the keyboard element is preferably so that the keyboard and the display are essentially entirely exposed (Figures 1 and 2 in relation to each other, the first extreme position is closed as in Figure 1 and the second is open and turning between closed and open exposes the display).

4. Claims 8, 9, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim I, (WO 97/41677), in view of Lundquist, and further in view of Kim II (WO 98/19434).

Regarding claims 8 and 17, the Kim I / Lunquist combination provide for extreme positions of the keyboard but this combination only takes into account one keyboard.

Kim II is utilized as a teaching reference as it shows an electronic device characterized in that another display and another keyboard are arranged in it for activating one or more functions

of the electronic device preferably when the keyboard element is in said first extreme position (Figure 2 and page 4, line 29 to page 5, line 6 - Kim discloses two keypads and two displays).

Kim I, Lunquist, and Kim II are combinable because they share a common, namely portable telephones that allow keypad usage with touch sensitive elements. At the time of the applicant's invention it would have been obvious to modify the Kim I / Lunquist combination to include a second keypad as done by Kim II to allow for more aggressive function controlling.

Regarding claims 9, and 18, Kim II provides for a position-recognizing element (page 2, lines 23-26).

5. Claims 4, 5, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim I, in view of Lundquist, and further in view of Eriksson.

Regarding claims 4, and 13, The Kim I / Lundquist combination discloses an electronic device, which comprises at least a keyboard (page 2, lines 3-14), which keyboard comprises at least one key for controlling the functions of the electronic device (page 5, lines 7-35), which keyboard is arranged as a keyboard plate, characterized in that said keyboard also comprises a touch sensitive element. However, the combination does not include a sliding keyboard element.

Eriksson discloses telephone that is small when not in use and appropriately big when being used. Eriksson, thus, teaches an electronic device according to claim 1, characterized in



that it comprises a sliding keyboard element, in which the keyboard is disposed (page 4, line 35 to page 5, line 10).

Kim I/ Lundquist and Eriksson are combinable since they share a common endeavor, namely, mobile telephones with adjustable keypads. At the time of the applicant's invention it would have been obvious to modify Kim I/ Lundquist to include means for allowing one of the keypads to slide to thereby increase the length of the mobile telephone as done by Eriksson to allow for a more diminutive mobile telephone.

Regarding claims 5 and 14, Eriksson teaches an electronic device, which comprises at least one body housing element, characterized in that the keyboard element, which has a first and a second extreme position (Figures 1 and 2 and page 3, line 18 to page 4, line 7), is arranged as sliding between the first and the second extreme position, and in the first extreme position the keyboard element is preferably under the body housing element so that the keyboard is at least partly invisible (Figure 2), and in the second extreme position the keyboard element is preferably so that the keyboard is essentially entirely exposed (Figure 1).

#### ***Allowable Subject Matter***

6. Claims 3 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 3 and 12, the use of a bubble membrane for the make up of a keyboard plate was neither found, suggested, nor made evident by the prior art.

Art Unit: 2684

*Conclusion*

8. Any inquiry concerning this communication from the examiner should be addressed to Alan Gantt at telephone number (703) 305-0077. The examiner can normally be reached between 9:30 AM and 6 PM within the Eastern Time Zone. The group FAX number is (703) 872-9314.

Any inquiry of a general nature or relating to this application should be directed to the group receptionist at telephone number (703) 305-4700.

*Alan T. Gantt*

Alan T. Gantt

May 29, 2004



**NICK CORSARO  
PATENT EXAMINER**